TENNESSEE DEPARTMENT OF EDUCATION
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Rehabilitation Careers

Primary Career Cluster:	Health Science
Consultant:	Amy F. Howell, (615) 532-2839, Amy.F.Howell@tn.gov
Course Code(s):	5990
Prerequisite(s):	*Health Science Education* (5998)
Credit:	1
Grade Level:	10-11
Graduation Requirements:	This course satisfies one of three credits required for an elective focus when taken in conjunction with other Health Science courses.
Programs of Study and Sequence:	This is a third course choice in the *Therapeutic Clinical Services* program of study and the second course in the *Clinical Exercise Physiology* program of study.
Aligned Student Organization(s):	HOSA: http://www.tennesseehosa.org Amanda Hodges, (615) 532-6270, Amanda.Hodges@tn.gov
Coordinating Work-Based Learning:	Teachers are encouraged to use embedded WBL activities such as informational interviewing, job shadowing, and career mentoring. For information, visit http://tn.gov/education/cte/work_based_learning.shtml.
Available Student Industry Certifications:	None
Dual Credit or Dual Enrollment Opportunities:	There are no known dual credit/dual enrollment opportunities for this course. If interested in developing, reach out to a local postsecondary institution to establish an articulation agreement.
Teacher Endorsement(s):	577, 720
Required Teacher Certifications/Training:	None
Teacher Resources:	http://www.tn.gov/education/cte/HealthScience.shtml

Course Description

Rehabilitation Careers is an applied course designed to prepare students to pursue careers in rehabilitation services. Upon completion of this course, a proficient student will be able to identify careers in rehabilitation services, recognize diseases, disorders or injuries related to rehabilitation services and correlate the related anatomy and physiology then develop a plan of treatment with appropriate modalities. Standards in this course are aligned with Tennessee State Standards for English

Language Arts & Literacy in Technical Subjects, as well as Tennessee state standards in Anatomy and Physiology.*

Program of Study Application

This is the second course in the *Clinical Exercise Physiology* program of study and the third course in the *Therapeutic Clinical Services* program of study. For more information on the benefits and requirements of implementing these programs in full, please visit the Health Science website at http://www.tn.gov/education/cte/HealthScience.shtml.

Course Standards

Careers

1) Research careers within the Rehabilitation career pathway in Athletic Training, Physical Therapy, Occupational Therapy, Speech Therapy, Music Therapy, Pet Therapy, Exercise Therapy, Message Therapy, Chiropractic Medicine and Recreation Therapy. Explain in detail the educational/credentialing requirements, professional organizations, and continuing education unit requirements necessary for success in these fields, as well as state and national compliance guidelines required of Rehabilitation professionals. (TN Reading 2, 9; TN Writing 9)

2) Investigate and compare the range of skills, competencies, and professional traits required for careers in the Rehabilitation careers pathway. Using real-time and projected labor market data, identify local and national employment opportunities and determine areas of growth in rehabilitation careers. (TN Reading 2, 7; TN Writing 8, 9)

3) Compare and contrast the specific laws and ethical issues that impact relationships among patients/clients and the healthcare professional, and debate these issues in an oral or written format. Include issues such as codes and standards of practice. (TN Reading 2, 9; TN Writing 1, 4)

4) Summarize the Health Insurance Portability and Accountability Act (HIPAA) and other legal directives regarding medical treatment and analyze their impact on patient rights. Include confidential information shared concerning minor athletes and/or patients with someone other than parents. (TN Reading 1; TN Writing 9)

Healthcare Systems

5) Calculate the costs of a range of health insurance plans, including deductibles, co-pays, PPO's and HMO's. For a selected disease/disorder/injury, predict the total cost (including but not limited to the diagnostics, procedures, and medications involved), allowable reimbursement, and actual reimbursement under each of these plans for the course of the treatment. (TN Reading 7; TN Writing 8, 9)

6) Investigate current issues and practices surrounding assessment and treatment of clients seeking rehabilitation services such as athletes, military personnel, or patients recovering from surgery or trauma. Demonstrate understanding and application of major legislation and policy affecting patient/client interaction by determining the central idea or conclusion of a text.

Construct an argumentative essay explaining the identified issue, any legislation and outcomes. Include both claims and counterclaims equally. (TN Reading 2; TN Writing 1)

7) Gather information on the history and development of physical therapy, occupational therapy, speech therapy, and athletic training, including but not limited to significant changes in the profession, major contributors to the field, and impactful practices that were developed. Document findings from print and digital professional journals, rehabilitation career related websites, and textbooks in an oral, visual, digital, or paper product with proper citations. (TN Reading 1, 2; TN Writing 6, 8)

8) Evaluate factors that contribute to effective patient/client communication, demonstrating sensitivity to barriers, cultural differences, and special needs individuals. Apply effective practices within a lab/clinical setting. (TN Reading 2; TN Writing 9)

Anatomy and Physiology

9) Outline the gross and cellular anatomy and physiology of the musculoskeletal, neurological, and cardiovascular systems. Review the gross anatomy of the other systems studied in previous courses. (TN Reading 2; TN Writing 8, 9; TN A&P 1, 2, 3, 4)

10) Investigate the basic principles of kinesiology and relate in an informational paper, brochure, or presentation the connection to disease/disorder prevention. Address at minimum: movements of joints and bones, planes, directional terms, body motions, motions between joint articular surfaces, mechanisms of joints and biomechanical levers. (TN Reading 1, 4; TN Writing 6, 9; TN A&P 1, 2)

11) Compare and contrast physiological responses of patients of differing ages, current health status, and presence of acute and/or chronic diseases. For example, compare the response of a healthy elderly patient with a fractured femur to an overweight adolescent with the same fracture. Explain how one would differentiate treatment to meet varying conditions. (TN Reading 2, 9; TN Writing 4, 9; TN A&P 1, 2)

12) Describe the physiological and pathological processes of trauma, wound healing, and tissue repair, and evaluate their implications on the development, progression, and implementation of a therapeutic exercise regimen. For example, examine a post-operative cardiac patient undergoing cardiac rehabilitation. (TN Reading 2, 4; TN Writing 9; TN A&P 1, 2, 3, 4)

13) Identify signs and symptoms as well as pathophysiology for the following injuries/diseases/disorders as they are connected to Rehabilitation Careers. Relate who the appropriate professional would be to provide the care:
    a. Acute inflammation related to an injury
    b. Shock
    c. Communicable diseases, such as pertussis or influenza
    d. Adverse reaction to environmental conditions, both heat and cold
    e. Open and closed wounds
    f. Asthma
    g. Neurological disorders such as stroke, dizziness, and/or vestibular disorders
    h. Orthopedic conditions

i. Speech disorders and/or swallowing disorders
j. Work- or sports-related injuries
k. Ambulation or gait difficulties
l. Concussions
m. Soft Tissue Injuries

(TN Reading 1, 4; TN Writing 8, 9; TN A&P 1, 2, 3, 4)

Evaluation and Treatment

14) Describe evidence-based techniques and procedures for evaluating common medical conditions, disabilities, and injuries. Discuss at minimum the procedures surrounding inspection/observation, palpation, testing of flexibility, endurance, and strength, special evaluation techniques, and neurological testing. Role-play practicing these skills on a classmate and/or family member, or within in a lab/clinical setting. (TN Reading 1, 4, 9; TN Writing 7, 9)

15) Define the basic components of injury-specific rehabilitation goals, functional progress, and outcomes in a therapeutic exercise regime. Apply these concepts to a specific case; for example, outline standard goals for a patient who is aphasic. (TN Reading 1, 9; TN Writing 8, 9)

16) List and define the goals, indications, contraindications, and various techniques of therapeutic exercise, including both general and specific exercise regimes relative to treatment of soft tissue, bony, neurological disorders/diseases, and post-surgical complications. (TN Reading 1, 8, 9; TN Writing 4, 8, 9)

17) Describe the indications, contraindications, theory, and principles for the incorporation and application of therapeutic exercise equipment and techniques, including but not limited to: continuous passive motion machine, aquatic therapy, manual therapy, adaptive therapeutic techniques, and/or assistive devices and mobilization. (TN Reading 1, 8, 9; TN Writing 4, 8, 9)

18) Describe common surgical techniques and relevant anatomical alterations that may affect the implementation of a therapeutic exercise regime. (TN Reading 2, 9; TN Writing 2, 9)

19) Using appropriate medical language and terminology, interpret objective and subjective data obtained in standard 13 in developing an appropriate therapeutic treatment plan for a given injury, disease, or disorder, including determination of goals and objectives in order to return the patient to maximum level of performance based on level of functional outcomes. (TN Reading 2, 4; TN Writing 2, 9)

Patient Interaction

20) Understand and successfully practice or evaluate the following treatment modalities with identification of appropriate equipment and inclusion of sanitation methods, universal precautions, and proper body mechanics.
    a. Passive and Active Range of Motion exercises
    b. Gait training with assistive devices
    c. Cryotherapy, elevation, and compression
    d. Hydrotherapy
    e. Heat therapy

f. Electrostimulation (such as e-stim, TENS, or Ultrasound)
g. Wound care with or without external hemorrhage
h. Extrication and transport of athletes
i. Normalization of body temperature in extreme heat or cold environments

(TN Reading 1, 3)

21) Summarize in an informational paper, brochure, or digital presentation the specific symptoms and proper responses to life-threatening events such as shock, brain injury, and spinal cord injury in athletes. (TN Reading 1; TN Writing 1, 4)

22) Adhering to industry standards and using appropriate medical terminology, document the findings from evaluation, treatment plan, and progress in the therapeutic exercise regime related to a disease or disorder examined in standard 20 or 21. (TN Reading 2, 3, 9; TN Writing 2, 8, 9)

Prevention of Injuries

23) Identify the basic concepts of wellness screening in connection to injury prevention. Complete an injury prevention assessment in a lab/clinical setting.(TN Reading 2, 3; TN Writing 7, 9)

24) Explain and demonstrate the effectiveness of taping, wrapping, bracing, and use of other supportive/protective devices in preventing exacerbation of injury, disease, or disorder in a lab/clinical setting. (TN Reading 2, 3 ; TN Writing 7, 9)

25) Develop a patient health education plan for a real or imagined person that describes recommended preventive measures, signs and symptoms of exacerbation of disease/disorder/injury, pharmacological needs, and support systems to ensure safe and speedy recovery. Incorporate and properly cite information from at least three authoritative sources such as textbooks, digital or print healthcare journals, or interviews with related healthcare professionals. Examples of possible topics include effective heat loss and heat illness prevention, work back injury prevention, reaching and maintaining optimal weight, safe and effective physical activity, and use of pet, recreation, or music therapy in autistic children. (TN Reading 2, 4, 5, 9; TN Writing 2, 8, 9)

Standards Alignment Notes

*References to other standards include:

- TN Reading: Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects; Reading Standards for Literacy in Science and Technical Subjects 6-12; Grades 9-10 Students (page 62).
    - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standard 10 at the conclusion of the course.
- TN Writing: Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects; Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12; Grades 9-10 Students (pages 64-66).

    - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standards 3, 5, and 10 at the conclusion of the course.
- TN A&P: Tennessee Department of Education Curriculum Standards, Secondary 9-12 Science, Human Anatomy & Physiology.
- P21: Partnership for 21st Century Skills Framework for 21st Century Learning
    - Note: While not all standards are specifically aligned, teachers will find the framework helpful for setting expectations for student behavior in their classroom and practicing specific career readiness skills.